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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/719,933 | 02/12/2001 | Andreas Widl | 3245-779PUS | 5320 |

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01/16/2003

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| EXAMINER |
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LEE, SEUNG H

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| ART UNIT | PAPER NUMBER |
|----------|--------------|

2876

DATE MAILED: 01/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/719,933

Applicant(s)

WIDL ET AL.

Examiner

Seung H Lee

Art Unit

2876

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4-23 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 4-23 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Prelim. Amdt./Amendment

1. Receipt is acknowledged of the Preliminary Amendment filed on 12 February 2000.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Objections

3. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 18-37 been renumbered as 3-23.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4, 7-12, and 15-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Farhangi (GB 2,295,476A) in view of Mertens et al. (US 5,767,505)(hereinafter referred to as 'Mertens').

Farhangi teaches an in-vehicle GPS receiver in which serves as the toll apparatus in the vehicle wherein the in-vehicle GPS receiver is communicating wirelessly with a control device or a fixed GPS receiver through RF communication means wherein the fixed GPS receiver is located overhead bridge, flyover, tunnel entrance etc., classifying for allocating the passing vehicle based on the predefined criteria such (e.g., time of day, location and type of road, etc.), evaluating or analyzing the responded data from communication means and classifying means, recording or capturing the vehicle's image using a back end box (BEB) if the analyzing process contains error or the vehicle fails to respond to the interrogation signals, wherein the BEB including the two light spot for capturing the image of the vehicle precisely then compressing the image (see Figs. 1-4; page1, line 24- page 2, line 1; page 4, line 16- page 5, line 2; page 6, line 19-26; page 10, line 17- page 11, line 35).

However, Farhangi fails to particularly teach the predetermined criteria are based on the vehicle class.

Mertens teaches the toll charge are based on the type of vehicle in which the vehicle are identified using cameras (13-16), encrypting the transmission data using DES method, comparing the transmitted data with captured data, and transmitting the data to a central computer via radio network (col. 3, lines 31-67; col. 5, lines 45-54)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Mertens to the teachings of Farhangni in order to provide an improved and an enhanced toll pricing system means for calculating the toll charge based on the type of vehicle. Moreover, such modification would provide an additional security mean for encrypting the information/data in which operates(s)/user(s) need to supply the private key for decrypting the encrypted information/data. Furthermore, such modification would provide secure storage of information/data means for transmitting information/data to the central system for backing-up information/data for future processing, and therefore an obvious expedient.

6. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Farhangi as modified by Mertens as applied to claim 4 above, and further in view of Rokitansky et al. ("Methods and tools for performance evaluation and validation of vehicle-roadside communications proposed for standardization", Vehicular Technology Conference, 1995 IEEE 45th, Volume: 2, 25-28, Jul 1995, Page(s): 964 -970 vol.2) (hereinafter referred to as 'Rokitansky').

The teachings of Farhangi/Mertens have been discussed above.

Although, Farhangi/Mertens teaches the satellite supported toll system, they fail to teach or fairly suggest that the communication system includes a dedicated short-range communication (DSRC) device.

However, Rokitansky teaches the medium for accessing DSRC protocol using 5.8GHz (see Abstract; page 964-965).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Rokitansky to the teachings of Farhangni/Mertens in order to meet the standardization protocol for vehicle entering communication zone in European and North America, and therefore an obvious expedient.

7. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Farhangi as modified by Mertens as applied to claim 4 above, and further in view of Hasselbring (US 5,717,390).

The teachings of Farhangi/Mertens have been discussed above.

Although, Farhangi/Mertens teaches the satellite supported toll system, they fail to teach or fairly suggest that the communication system includes a radar sensor and a laser sensor.

However, Hasselbring teaches using radar or laser for classifying the vehicle type thereof (see Fig1; col. 9, lines 26-40).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the radar and laser sensor as taught by Hasselbring to the toll systems of Farhangi/Mertens in order to improve accuracy of classifying the vehicle passing through toll area means wherein the vehicle are classified according to predominant characteristics such as length, height, axle, existence of trailer of a trailers and specific envelope contour (i.e., motorcycle, car, truck, bus, limousine, etc.) using the radar and/or laser sensors, and therefore an obvious expedient.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure;

Blomqvist et al. [US 5,859,415], Sekine [US 5,204,675], and Hering et al. [US 5,440,109] disclose a toll collection system.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Seung H. Lee whose telephone number is (703) 308-5894. The examiner can normally be reached on Monday to Friday from 7:30 AM to 4:00 PM.

If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee, can be reached on (703) 305-3503. The fax-phone number for this group is (703) 308-5841 or (703) 308-7722.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to **[michael.lee@uspto.gov]**.

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Art Unit: 2876

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

Seung H. Lee
Art Unit 2876
January 10, 2003



Diane I. Lee
Diane I. Lee
Primary Examiner
CIAU 2876